

PatBase - Search results 10 May 2018

Search query (2): [SP]: amended claims received by the international bureau on 28 march 2016 (28.03.2016) 1. a computer-implemented method, comprising: receiving input data from a plurality of sensors processing the input data to generate one or more output maps generating a planting pattern for a planting operation using the one or more output maps, the planting pattern defining a plurality of locations wherein each location of the plurality of locations is associated with at least one species of plant to be planted at the location by a planting platform and one or more planting conditions determining a quantity of planting platforms available dividing the planting pattern into a plurality of portions based on the quantity of planting platforms available uploading to each available planting platform a corresponding portion of the plurality of portions and executing the planting operation using the available planting platforms. 2. the computer-implemented method of claim 1, wherein the planting platforms include one or more unmanned aerial vehicles (uavs). 3. the computer-implemented method of claim 1, wherein the one or more output maps include terrain data identifying one or more of structures, terrain types, and debris, and wherein generating a planting pattern for a planting operation using the one or more output maps includes identifying areas for planting based on the terrain data. 4. the computer-implemented method of claim 3, wherein generating a planting pattern for a planting operation using the one or more output maps further comprises: applying one or more terrain thresholds to the tags in the one or more output maps and tagging one or more regions of the one or more output maps with threshold data to generate one or more enriched output maps. 5. the computer-implemented method of claim 4, further comprising: comparing the enriched output maps to planting requirements for a payload identifying, based on the comparison, one or more planting regions for the payload and 47 defining the planting pattern for the payload based on a density level associated with the payload. 6. a planting apparatus comprising: a casing comprising an inner surface and an outer surface, wherein a first end portion of the casing is closed to form a chamber and a second end portion of the casing is open a payload in the chamber, the payload including planting material and matrix material and a lid having a lower surface and an upper surface, the lower surface adapted to seal the second end portion of the casing. 7. the planting apparatus of claim 6, wherein the casing is made of biodegradable materials and includes a nutrient mixture specific to the payload. 8. the planting apparatus of claim 7, wherein the casing is substantially conical and wherein one or more of the casing and the lid are adapted to break upon impact with a planting environment, exposing the payload to the planting environment. 9. the planting apparatus of claim 6, further comprising: a pushrod connected to the lower surface of the lid and extending through the first end portion of the casing, wherein at impact with a substrate the pushrod causes the lid to open. 10. the planting apparatus of claim 6, further comprising: one or more wings connected to the upper surface of the lid, the one or more wings adapted to cause the planting apparatus to spin when released from a first height. 11. the planting apparatus of claim 6, wherein the outer surface of the casing comprises one or more stabilization surfaces, the one or more stabilization surfaces adapted to cause the planting apparatus to spin about its axis. 12. the planting apparatus of claim 6, wherein the upper surface of the lid comprises one or more stabilization surfaces extending from the upper surface of the lid. 13. the planting apparatus of claim 6, further comprising: one or more sensors integrated with the casing 48 an energy generation system connected to an energy storage system, wherein the energy storage system provides energy to the one or more sensors wherein the one or more sensors include at least one communication module and at least one environmental sensor, the at least one communication module configured to transmit data from the at least one environmental sensor to a second planting apparatus. 14. the planting apparatus of claim 13, wherein the second planting apparatus includes a second communication module configured to transmit data received from a plurality of planting apparatuses to a base station. 15. an automated planting system, comprising: a planting system including a chamber connected to a trigger-controlled firing mechanism, a barrel, and a feeder, wherein the trigger-controlled firing mechanism is configured to direct a pod fed into the chamber by the feeder, through the barrel a trigger control system connected to the trigger-controlled firing mechanism and configured to receive data from one or more sensors, wherein the trigger control system is configured to determine a position of the mobile transport platform using the one or more sensors compare the position of the mobile transport platform to a first location in a planting pattern and determine that the position is within a threshold distance of the first location and cause the trigger-controlled firing mechanism to fire a pod at the first location. 16. the automated planting system of claim 15, further comprising: a mobile transport platform coupled to the planting system, the mobile transport platform including the one or more sensors, wherein the mobile transport platform is a unmanned aerial vehicle. 17. the automated planting system of claim 15, wherein the firing mechanism further comprises: a high pressure chamber connected to the chamber via an electronically controlled valve, wherein when the trigger control system causes the trigger controlled firing mechanism to fire the pod by opening the electronically controlled valve. 18. the automated planting system of claim 17, wherein the high pressure chamber includes a compressed gas cylinder that pressurizes the high pressure chamber. 19. the automated planting system of claim 17, further comprising: a gimbal rotatably coupling the planting system to the mobile transport platform. 20. the automated planting system of claim 15, further comprising: a mapping system configured to receive data from the one or more sensors, wherein the mapping system generates the planting pattern based on the data from the one or more sensors. 21. the computer-implemented method of claim 5, wherein the payload includes one or more of one or more of: planting material for the at least one species of plant at least one organism support matrix material or sensor. 22. the computer-implemented method of claim 21 further comprising: defining the planting pattern for the payload based on a distribution of plant species in an area represented by the output maps. 23. the computer-implemented method of claim 21 further comprising: defining the planting pattern for the payload based on soil restoration requirements. 24. the computer-implemented method of claim 21 further comprising: defining the planting pattern for the payload based on one or more decorative patterns. 25. the computer-implemented method of claim 1, wherein each location of the plurality of locations is further associated with one or more of one or more of: at least one organism support matrix material or sensor. 26. the automated planting system of claim 15 wherein the trigger control system is further configured to cause the trigger-controlled firing mechanism to fire a pod based on a signal received from a user device.

Results: 8**Search history**

Search pn=WO2016049217 (Results 1)

1:

Search [SP]: amended claims received by the international bureau on 28 march 2016 (28.03.2016) 1. a computer-implemented method, comprising: receiving input data from a plurality of sensors processing the input data to generate one or more output maps generating a planting pattern for a planting operation using the one or more output maps, the planting pattern defining a plurality of locations wherein each location of the plurality of locations is associated with at least one species of plant to be planted at the location by a planting platform and one or more planting conditions determining a quantity of planting platforms available dividing the planting pattern into a plurality of portions based on the quantity of planting platforms available uploading to each available planting platform a corresponding portion of the plurality of portions and executing the planting operation using the available planting platforms. 2. the computer-implemented method of claim 1, wherein the planting platforms include one or more unmanned aerial vehicles (uavs). 3. the computer-implemented method of claim 1, wherein the one or more output maps include terrain data identifying one or more of structures, terrain types, and debris, and wherein generating a planting pattern for a planting operation using the one or more output maps further comprises: applying one or more terrain thresholds to the tags in the one or more output maps and tagging one or more regions of the one or more output maps with threshold data to generate one or more enriched output maps. 5. the computer-implemented method of claim 4, further comprising: comparing the enriched output maps to planting requirements for a payload identifying, based on the comparison, one or more planting regions for the payload and 47 defining the planting pattern for the payload based on a density level associated with the payload. 6. a planting apparatus comprising: a casing comprising an inner surface and an outer surface, wherein a first end portion of the casing is closed to form a chamber and a second end portion of the casing is open a payload in the chamber, the payload including planting material and matrix material and a lid having a lower surface and an upper surface, the lower surface adapted to seal the second end portion of the casing. 7. the planting apparatus of claim 6, wherein the casing is made of biodegradable materials and includes a nutrient mixture specific to the payload. 8. the planting apparatus of claim 7, wherein the casing is substantially conical and wherein one or more of the casing and the lid are adapted to break upon impact with a planting environment, exposing the payload to the planting environment. 9. the planting apparatus of claim 6, further comprising: a pushrod connected to the lower surface of the lid and extending through the first end portion of the casing, wherein at impact with a substrate the pushrod causes the lid to open. 10. the planting apparatus of claim 6, further comprising: one or more wings connected to the upper surface of the lid, the one or more wings adapted to cause the planting apparatus to spin when released from a first height. 11. the planting apparatus of claim 6, wherein the outer surface of the casing comprises one or more stabilization surfaces, the one or more stabilization surfaces adapted to cause the planting apparatus to spin about its axis. 12. the planting apparatus of claim 6, wherein the upper surface of the lid comprises one or more stabilization surfaces extending from the upper surface of the lid. 13. the planting apparatus of claim 6, further comprising: one or more sensors integrated with the casing 48 an energy generation system connected to an energy storage system, wherein the energy storage system provides energy to the one or more sensors wherein the one or more sensors include at least one communication module and at least one environmental sensor, the at least one communication module configured to transmit data from the at least one environmental sensor to a second planting apparatus. 14. the planting apparatus of claim 13, wherein the second planting apparatus includes a second communication module configured to transmit data received from a plurality of planting apparatuses to a base station. 15. an automated planting system, comprising: a planting system including a chamber connected to a trigger-controlled firing mechanism, a barrel, and a feeder, wherein the trigger-controlled firing mechanism is configured to direct a pod fed into the chamber by the feeder, through the barrel a trigger control system connected to the trigger-controlled firing mechanism and configured to receive data from one or more sensors, wherein the trigger control system is configured to determine a position of the mobile transport platform using the one or more sensors compare the position of the mobile transport platform to a first location in a planting pattern and determine that the position is within a threshold distance of the first location and cause the trigger-controlled firing mechanism to fire a pod at the first location. 16. the

automated planting system of claim 15, further comprising: a mobile transport platform coupled to the planting system, the mobile transport platform including the one or more sensors, wherein the mobile transport platform is a unmanned aerial vehicle. 17. the automated planting system of claim 15, wherein the firing mechanism further comprises: a high pressure chamber connected to the chamber via an electronically controlled valve, wherein when the trigger control system causes the trigger controlled firing mechanism to fire the pod by opening the electronically controlled valve. 18. the automated planting system of claim 17, wherein the high pressure chamber includes a compressed gas cylinder that pressurizes the high pressure chamber. 19. the automated planting system of claim 17, further comprising: a gimbal rotatably coupling the planting system to the mobile transport platform. 20. the automated planting system of claim 15, further comprising: a mapping system configured to receive data from the one or more sensors, wherein the mapping system generates the planting pattern based on the data from the one or more sensors. 21. the computer-implemented method of claim 5, wherein the payload includes one or more of one or more of: planting material for the at least one species of plant at least one organism support matrix material or sensor. 22. the computer-implemented method of claim 21 further comprising: defining the planting pattern for the payload based on a distribution of plant species in an area represented by the output maps. 23. the computer-implemented method of claim 21 further comprising: defining the planting pattern for the payload based on soil restoration requirements. 24. the computer-implemented method of claim 21 further comprising: defining the planting pattern for the payload based on one or more decorative patterns. 25. the computer-implemented method of claim 1, wherein each location of the plurality of locations is further associated with one or more of one or more of: at least one organism support matrix material or sensor. 26. the automated planting system of claim 15 wherein the trigger control system is further configured to cause the trigger-controlled firing mechanism to fire a pod based on a signal received from a user device. (Results 8)

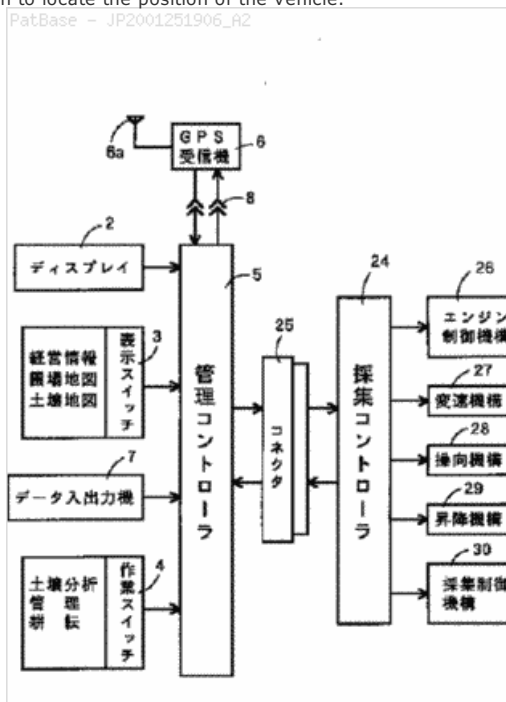
Title: WORKING VEHICLE FOR AGRICULTURE

Abstract: PROBLEM TO BE SOLVED: To efficiently perform the central control of plural farm fields and the farm work suitable for each farm field. SOLUTION: This working vehicle for agriculture is provided with a GPS receiver 6 to locate the position of the vehicle and with a management information data base for the plural fields to be managed. It has a navigation function to display the position of an arbitrary field among the above plural fields based on the information containing the management information data base as well as a function to locate the position of the vehicle and an automatic traveling function while confirming the position in the field based on the function to locate the position of the vehicle.

Classifications:

International (IPC 8-9): A01B69/00 A01B79/00 A01C21/00
A01M7/00 G01C21/00 G08G1/0969 (Advanced/Invention);
A01B69/00 A01B79/00 A01C21/00 A01M7/00 G01C21/00
G08G1/0969 (Core/Invention)

International (IPC 1-7): A01B69/00 A01B79/00 A01C21/00
A01M7/00 G01C21/00 G08G1/0969

**Family:**

Publication number	Publication date	Application number	Application date
JP2001251906 A2	20010918	JP20000069666	20000314

Priority:

JP20000069666 20000314

Probable Assignee: YANMAR AGRICULT EQUIP

Assignee(s): (std): YANMAR AGRICULT EQUIP

Assignee(s): YANMAR AGRICULT EQUIP CO LTD ; YANMAR AGRICULTURAL EQUIPMENT CO LTD ; YANMAR CO LTD

Inventor(s): (std): KITA TAKESHI

Title: FLEXIBLE AGRICULTURAL AUTOMATION

Abstract: Agricultural operations by applying flexible manufacturing software, robotics and sensing techniques to agriculture. In manufacturing operations utilizing flexible machining and flexible assembly robots, work pieces flow through a fixed set of workstations on an assembly line. At different stations are located machine vision systems, laser based raster devices, radar, touch, photocell, and other methods of sensing; flexible robot armatures and the like are used to operate on them. This flexible agricultural automation turns that concept inside out, moving software programmable workstations through farm fields on mobile robots that can sense their environment and respond to it flexibly. The agricultural automation will make it possible for large scale farming to take up labor intensive farming practices which are currently only practical for small scale farming, improving land utilization efficiency, while lowering manpower costs dramatically.

Classifications:

International (IPC 8-9): A01B51/02 A01B69/04 A01B79/00 B25J9/16
G01S19/48 (Advanced/Invention);
G05D1/02 (Advanced/Non-invention);
A01B51/00 A01B69/04 A01B79/00 B25J9/16
G01S19/00 (Core/Invention);
G05D1/02 (Core/Non-invention)

International (IPC 1-7): G06F19/00

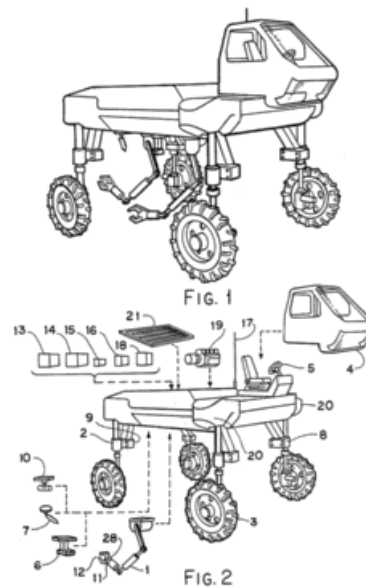
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G05B2219/39259 G05B2219/45017 G05D2201/0201 B25J5/005
B25J5/007 B25J5/06 B25J11/00

European: A01B51/02 A01B69/00F1 A01B79/00P B25J9/16K2
S05B219/39259 S05B219/45017 S05D1/02E10 S05D1/02E16B
S05D1/02E16D S05D1/02E5 S05D1/02E6D2 S05D1/02E6N
S05D1/02E6V S05D1/02E8 S05D201/0201

US: 250/339.11 250/341.2 342/357.06 342/357.13 342/357.17
342/357.31 342/463 348/120 356/73 47/1.01R 47/58.1FV 700/245
700/258 700/259 700/264 701/213 701/214 701/215 701/28 701/300
701/41 701/468 701/50

PatBase - US6671582_BA

U.S. Patent Dec. 30, 2003 Sheet 1 of 3 US 6,671,582 B1



Family:

Publication number	Publication date	Application number	Application date
US6671582 BA	20031230	US20020228248	20020826

Priority:

US20020228248 20020826

Probable Assignee:

HANLEY BRIAN P

Assignee(s):

HANLEY BRIAN P

Inventor(s): (std):

HANLEY BRIAN P

Title: ROBOT MECHANICAL PICKER SYSTEM AND METHOD

Abstract: Embodiments of the invention comprise a system and method that enable robotic harvesting of agricultural crops. One approach for automating the harvesting of fresh fruits and vegetables is to use a robot comprising a machine-vision system containing rugged solid-state digital cameras to identify and locate the fruit on each tree, coupled with a picking system to perform the picking. In one embodiment of the invention a robot moves through a field first to "map" the field to determine plant locations, the number and size of fruit on the plants and the approximate positions of the fruit on each plant. A robot employed in this embodiment may comprise a GPS sensor to simplify the mapping process. At least one camera on at least one arm of a robot may be mounted in appropriately shaped protective enclosure so that a camera can be physically moved into the canopy of the plant if necessary to map fruit locations from inside the canopy. Once the map of the fruit is complete for a field, the robot can plan and implement an efficient picking plan for itself or another robot. In one embodiment of the invention, a scout robot or harvest robot determines a picking plan in advance of picking a tree. This may be done if the map is finished hours, days or weeks before a robot is scheduled to harvest, or if the picking plan algorithm selected requires significant computational time and cannot be implemented in "real time" by the harvesting robot as it is picking the field. If the picking algorithm selected is less computationally intense, the harvester may calculate the plan as it is harvesting. The system harvests according to the selected picking plan. The picking plan may be generated in the scout robot, harvest robot or on a server. Each of the elements in the system may be configured to communicate with each other using wireless communications technologies.

Classifications:**International (IPC 8-9):** A01B69/00 A01D34/00 A01D34/68

A01D43/00 A01D45/00 A01D46/00 A01D46/30 A01D75/00

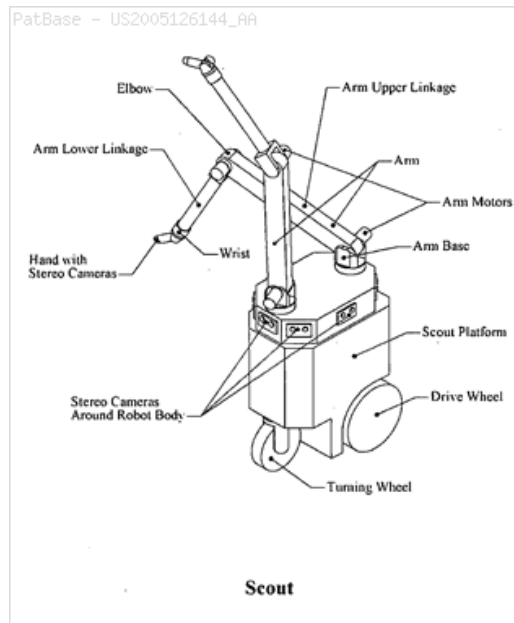
A01D75/28 A01D91/00 G01C21/32 G05D1/02

G06F19/00 (Advanced/Invention)

International (IPC 1-7): A01D75/28**CPC:** G05D1/021 A01D75/00 A01D91/00 Y10S901/01 A01D46/30**European:** A01D46/30**US:** 56/10.20A 56/10.20AP 56/10.20R 56/10.20RP 56/10.2A

56/10.2R 700/245 700/245P 700/253 700/253S 700/259 700/259S

701/208 701/25 701/50 701/532 701/532S 901/1

**Family:**

Publication number	Publication date	Application number	Application date
AU2005314708 AA	20060615	AU20050314708	20051209
AU2005314708 BB	20120209	AU20050314708	20051209
EP1830624 A2	20070912	EP20050853664	20051209
US2005126144 AA	20050616	US20040009909	20041209
US2006213167 AA	20060928	US20060354548	20060215
US2011137456 AA	20110609	US20100945871	20101114
US2013204437 AA	20130808	US20130776658	20130225
US7765780 BB	20100803	US20040009909	20041209
US7854108 BB	20101221	US20060354548	20060215
US8381501 BB	20130226	US20100945871	20101114
WO06063314 A2	20060615	WO2005US44796	20051209
WO06063314 A3	20090409	WO2005US44796	20051209

Priority:

US20030481781P 20031212 US20040009909 20041209 WO2005US44796 20051209
US20060354548 20060215 US20100945871 20101114 US20130776658 20130225

Probable Assignee: VISION ROBOTICS CORP**Assignee(s):** (std): KOSELKA HARVEY ; VISION ROBOTICS CORP ; WALLACH BRET**Assignee(s):** BRET WALLACH ; HARVEY KOSELKA**Inventor(s):** (std): KOSELKA HARVEY ; WALLACH BRET**Inventor(s):** HARVEY KOSELKA ; BRET WALLACH**Agent(s):** COLLISON AND CO; DALINA LAW GROUP PC; ARC IP LAW PC; JOSEPH J

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Title: FLYING APPARATUS FOR AERIAL AGRICULTURAL APPLICATION

Abstract: A remotely controlled flying apparatus (200) utilized for crop-spraying and crop monitoring purposes is disclosed. The present indention comprises a microcontroller (110) electronically coupled to an inertia measuring means (120). A controller (140) is connected to a computer (130) to allow a user to control movements of the flying apparatus (200). The computer (130) interprets control motions of the controller (140) and translates the motions to control signals. Upon translation, control signals are sent to the microcontroller (110) wirelessly and the control signals are modulated by a pulse modulation generator (150) before they are sent to a plurality of speed controllers (160a-160d) which are coupled to a plurality of motors (170a-170d). The controller (140) allows the user to control the motions of the flying apparatus remote! }, by changing respective rotational speeds of the plurality of motors (170a-170d). The controller (140) also allows the user to wirelessly control a pump (180) or a camera (190) or both through the computer (130) for spraying a pesticide or fertilizer fluid-when necessary or for crop monitoring purposes.

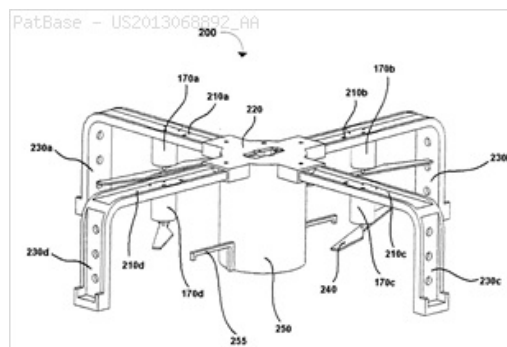
Classifications:

International (IPC 8-9): B64C13/20 B64C19/00 B64C27/20 B64C29/00 B64C39/02 B64D1/18 B64D47/08 (Advanced/Invention)

CPC: B64C39/024 B64C2201/027 B64C2201/125 B64D1/18

European: B64C39/02C B64D1/18

US: 244/190 701/3 701/4

**Family:**

Publication number	Publication date	Application number	Application date
US2013068892 AA	20130321	US20110701503	20110603
WO11152702 A1	20111208	WO2011MY00067	20110603

Priority:

MY20100002587 20100604 WO2011MY00067 20110603

Probable Assignee: UNIVERSITI MALAYSIA PERLIS

Assignee(s): (std): AZLAN BIN ABDUL GHANI ; BIN AHMAM ZUL AZFAR ; BIN DESA HAZRY ; BIN DZULKIFLI MOHD ZAHIRUDDIN ; MOHD ZAHIRUDDIN BIN DZULKIFLI ; ZUL AZFAR BIN AHMAM ; MUHAMAD FIRDAUS BIN MUHAMAD DALI ; UNIVERSITI MALAYSIA PERLIS ; HAZRI BIN DESA ; SHAIFUL ZAIRI BIN AHMAD SUBHI ; BIN MUHAMAD DALI MUHAMAD FIRDAUS

Inventor(s): (std): AZLAN BIN ABDUL GHANI ; BIN AHMAM ZUL AZFAR ; BIN DESA HAZRY ; BIN DZULKIFLI MOHD ZAHIRUDDIN ; BIN MUHAMAD DALI MUHAMAD FIRDAUS ; HAZRI BIN DESA ; MOHD ZAHIRUDDIN BIN DZULKIFLI ; MUHAMAD FIRDAUS BIN MUHAMAD DALI ; SHAIFUL ZAIRI BIN AHMAD SUBHI ; ZUL AZFAR BIN AHMAM

Agent(s): LOK CHOON HONG

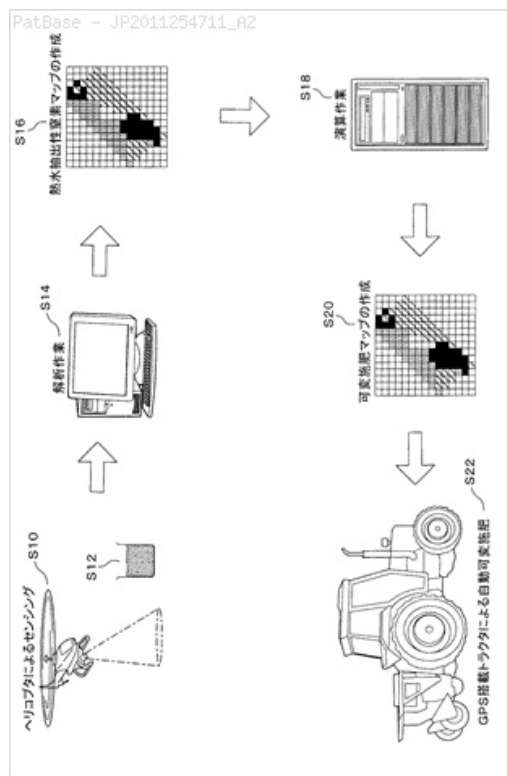
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Title: FERTILIZATION MAP GENERATING SYSTEM, METHOD FOR THE SAME, INDUSTRIAL HELICOPTER, SERVER, AND CONTROLLED FERTILIZER APPLICATOR

Abstract: PROBLEM TO BE SOLVED: To carry out adequate and efficient fertilization work by applying fertilizer for every mesh even to a wide farm field. SOLUTION: Various types of sensors mounted on an unmanned industrial helicopter are used to conduct remote sensing (remote searching) of a farm field, to measure the images of soil and the reflectance of natural light. While, soils of the farm field at a few points are sampled for analysis to obtain hot-water extracted nitrogen. Based on remote sensing data and soil sampling data thus obtained, a hot-water extracted nitrogen map is generated. Arithmetic processing is conducted based on the hot-water extracted nitrogen map, crops to be sowed and the data of the fertilization to be used, to generate a fertilization map, for example, per 10 m mesh unit. Based on the generated fertilization map and GPS position information, an automatic controlled fertilizer applicator is automatically controlled to distribute adequate fertilizer for fertilization.

Classifications:

International (IPC 8-9): A01C21/00 G06T1/00 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
JP2011254711 A2	20111222	JP20100129493	20100605

Priority:

JP20100129493 20100605

Probable Assignee: ZUKOSHA KK

Assignee(s): (std): ZUKOSHA KK

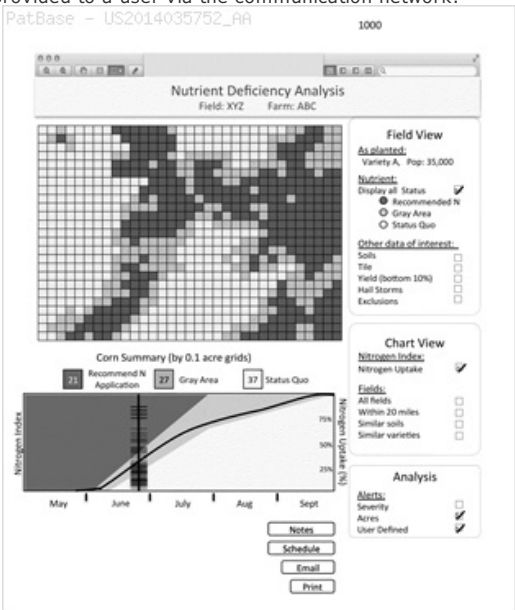
Inventor(s): (std): ENOMOTO YOSHINORI ; HOSHIYAMA KENICHI ; YOKOBORI JUN ; YONEYAMA AKIRA

Title: METHODS, APPARATUS, AND SYSTEMS FOR DETERMINING IN-SEASON CROP STATUS IN AN AGRICULTURAL CROP AND ALERTING USERS

Abstract: A crop's status may be determined from analysis of information regarding the crop received from, for example, a user, an in-season data gathering source, a database, a data feed, an aerial sensor, a UAV, and/or a remote sensor via a communication network. The received data may be compared to, for example, a benchmark, a parameter, a previously determined crop status, and/or a baseline associated with the crop and the comparison may be scored. When the score exceeds a predetermined threshold, an alert may be generated and provided to a user via the communication network.

Classifications:

International (IPC 8-9): A01B79/00 A01G1/00 G01W1/00 G06F17/30 G06F3/0484 G08B21/18 H04L29/06 (Advanced/Invention)
CPC: A01G1/001 G08B21/18 G06F17/30312 G06F17/3053 H04L65/403 G06F17/30598 G06F3/0484 G06F17/30554 A01B79/005 A01G22/00
US: 1/1 340/540 340/601



Family:

Publication number	Publication date	Application number	Application date
US2014035752 AA	20140206	US20120568109	20120806
US2015310721 AA	20151029	US20150794886	20150709
US9113590 BB	20150825	US20120568109	20120806

Priority:

US20120568109 20120806 US20150794886 20150709

Probable Assignee:

SUPERIOR EDGE INC

Assignee(s): (std):

JOHNSON JEROME DALE ; SUPERIOR EDGE INC

Inventor(s): (std):

JOHNSON JEROME DALE

Agent(s):

KINNEY AND LANGE PA

Title: AUTONOMOUS TRAVEL WORK SYSTEM

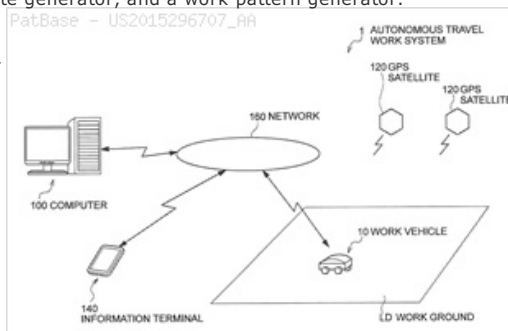
Abstract: An autonomous travel work system works, regarding a garden LD as a canvas and applying an arbitrary design to the garden LD, according to the design. The autonomous travel work system includes an information terminal configured to be input means and transmit input information, a computer configured to receive the input information, and at least one electric lawn mower configured to work autonomously traveling in the garden LD. The information terminal includes a display, a work ground input, a design allocation input, and a work request device. The information terminal or the computer includes a work ground designation device, a design allocation device, a mapping route generator, and a work pattern generator.

Classifications:

International (IPC 8-9): A01B69/00 A01B69/04 A01D34/00 A01D34/64 A01D34/68 A01D34/69 G05D1/00 G05D1/02 G06F3/0484 G06Q10/06 G06Q30/02 (Advanced/Invention)

CPC: G06F3/04847 G06F3/04845 G06Q30/0283 G06Q10/0631 A01D34/008 A01B69/008 G05D1/0274 G05D2201/0208 A01B69/00 A01D34/64 G05D1/00 G05D1/02 G05D1/0278 G05D1/0044 B60L11/1809 B60L11/1833 B60L11/1861 B60L15/20 B60L2200/22 B60L2200/40 B60L2220/46 B60L2240/421 B60L2240/461 B60L2240/622 B60L2260/32

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**Family:**

Publication number	Publication date	Application number	Application date
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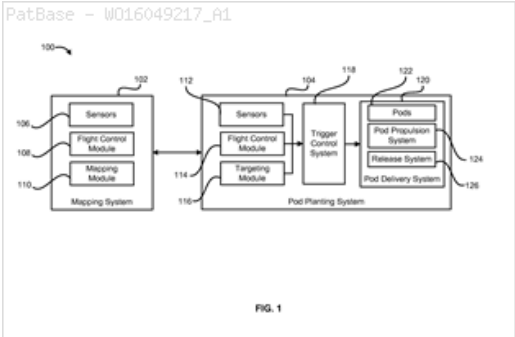
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Title: TECHNIQUES FOR AUTOMATED PLANTING

Abstract: Embodiments of the present invention provide techniques, including systems and methods, for planting using planting pods. A planting system can be configured to deliver pods including a payload (e.g., seeds, cuttings, or other planting materials) into or onto the ground at a predetermined location. In some embodiments, the automated planting system can include a mapping system that receives various sensor inputs and generates a map of a planting area. A pod planting system may use the map of the planting area to deliver pods to the planting area. The pod planting system may be executed automatically using the maps generated by the mapping system and/or manually by a remote operator. Each pod can include a payload to be planted on or in the ground by the pod planting system. Pods may be customized depending on the types of plants being planted, the terrain, prior planting results, etc.

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B64C39/02 (Advanced/Invention)
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